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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,123	12/02/2003	Raymond E. Ideker	5656.34	4773
20792 7590 06/29/2009 MYERS BIGEL, SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627				
EXAMINER				
BERTRAM, ERIC D				
ART UNIT		PAPER NUMBER		
3766				
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06/29/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/727,123

Applicant(s)

IDEKER ET AL.

Examiner

Eric D. Bertram

Art Unit

3766

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-40 and 43-59 is/are pending in the application.
- 4a) Of the above claim(s) 29, 30, 34-40, 46-48, 50, 53, 58 and 59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-28, 31-33, 43-45, 49, 51, 52 and 54-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment/Arguments

1. Applicant's request to reopen prosecution is granted. The finality of the rejection of the last Office action is withdrawn. Applicant's arguments with respect to claims 26-28, 31-33, 43-45, 49, 51-52 and 54-57 have been considered but are moot in view of the new ground(s) of rejection. As the applicant's amendments did not change the scope of the claims, this action has been made non-final.

Election/Restrictions

2. Claims 29, 30, 34-40, 46-48, 50, 53, 58 and 59 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 112

3. Claims 55 and 56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 55 and 56 depend from claims 41 and 42, respectively. Both claims 41 and 42 are cancelled. For examination purposes, it is assumed that the claims should depend from new claim 43.

5. Regarding claim 55, the claim contains the limitation "wherein the means for electronically identifying." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 26-28, 43, 49 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Rothman et al. (US 6,179,793, hereinafter Rothman).

8. Regarding claims 26-28 and 43, Rothman discloses a system and method for assisting in chest compression in a subject having cardiomalfunction, specifically heart failure (see abstract). Rothman discloses a cardiac activity sensor 326 in electrical communication with the heart of the subject in order to detect the QRS complex of the subject in real time using QRS detector 336 (Col. 15, lines 4-50). The QRS detector alerts a controller 322 to the occurrence of a spontaneous, intrinsic QRS complex, and the controller applies a blanking time in order to avoid delivery of a chest compression during the T-wave portion of the spontaneous intrinsic cycle (Col. 16, lines 5-25). A chest compression is then delivered following the blanking signal at a favorable time, that time being the next detected R-wave.

9. Further regarding claim 26, the QRS complex detected by Rothman inherently corresponds to a measure of intrinsic spontaneous activity of a heart of any subject, including those undergoing CPR.

10. Regarding claims 49 and 51, as described above, a system is run by code which identifies a vulnerable portion of an intrinsic spontaneous cardiac cycle in real time and

applies a blanking time to avoid the vulnerable portion. The system code also determines a favorable time to deliver the cardiac compression to avoid a T-wave of the subject. Regarding the limitations of the preamble, since Rothman described all of the limitations of the claim, the system can inherently time delivery of cardiac compression during CPR.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 31-33, 44, 45, 52 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothman in view of Halperin et al. (US 6,390,996, hereinafter Halperin).

15. Rothman, as modified above, discloses the applicant's basic invention with the exception of using closed chest manual compression of the heart. While the use of closed chest manual compression is notoriously old and well known in the art, attention is also directed to the secondary reference of Halperin, which discloses the use of closed chest manual compressions based on sensed ECG patterns (Col. 2, line 62-Col. 3, line 17). Halperin also discloses the use of an automated controller and automatic compression device, thus teaching that the use of manual compressions or automatic compressions is interchangeable when applying timed chest compressions. Therefore, since Halperin demonstrates that manual compressions and automatic compressions were art-recognized equivalents at the time of the applicant's invention for supplying timed chest compressions, one of ordinary skill in the art would have found it obvious to supply manual compressions instead of automatic compressions since they produce the same results.

16. Regarding claims 32, 44 and 54-56, Rothman, as modified, also does not disclose generating an audible alert when compression is to be initiated. However, Halperin discloses that the amplitude of an audible indicator may be delivered to coincide with the desired frequency of chest compressions (Col. 9, lines 20-28).

Furthermore, the audible indicator is inherently configured to indicate when to start and when to stop compressions since a user would compress in time with the audible signals, and would stop compression when the audible signal ceased. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Rothman by including an audible alert as taught by Halperin in order to prompt a user to manually compress the chest of a subject at the proper rate.

17. Regarding claims 52 and 57, the rejections applied above to similarly worded claims 32 and 52-56 apply here as well.

18. Regarding claim 45, Rothman, as modified above, does not disclose a display configured to display a spontaneous intrinsic cycle of a subject. However Halperin discloses displaying ECG on a monitor to ascertain a true ECG signal (Col. 11, lines 50-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include a visual display of cardiac cycles in order to help process ECG signals during the chest compressions. Furthermore, a visual display will inherently indicate a favorable time to deliver a chest compression since Rothman teaches delivering the compression on the R-wave while avoiding the T-wave.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric D. Bertram whose telephone number is (571)272-3446. The examiner can normally be reached on Monday-Thursday from 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl H. Layno can be reached on 571-272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Carl H. Layno/
Supervisory Patent Examiner, Art Unit 3766

/E. D. B./
Examiner, Art Unit 3766